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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,336	01/14/2002	Arie Sheffer	01/22377	6702

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EXAMINER

PIERCE, JEREMY R

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/043,336	Applicant(s) SHEFFER, ARIE	
	Examiner Jeremy R. Pierce	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 15, 18-21 and 31-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15, 18-21 and 31-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 5, 2004 has been entered.

Response to Amendment

2. Applicant's amendment filed on September 30, 2004 has also been entered. Claims 8-14, 16, 17, 22-30, and 43-99 have been cancelled. Claims 1-7, 15, 18-21, and 31-42 are currently pending. Applicant's amendment to claim 1 in the May 5, 2004 amendment is sufficient to overcome the previous rejections for reasons set forth in the interview summary on June 3, 2004. The 102 rejections set forth in sections 8 and 9 are withdrawn because neither Daigle et al. nor Stanislawczyk disclose a waterglass coating.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 15, and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slimak et al. (U.S. Patent No. 6,303,234).

Slimak et al. provide a waterglass coating to a paper or cloth material (column 1, lines 18-28). The material maintains a perviousness to air because the sodium silicate penetrates the porous material and forms microscopically thin glassy layers (column 2, lines 59-64). A porous structure allows air to enter. Slimak et al. do not disclose that the weight is increased by a factor less than 7 upon coating. However, Slimak et al. do recognize a great variety of coating concentrations that may be used. Slimak et al. teach using a range between 0.04 and 400 g of sodium silicate per kilogram of water (Abstract). It would have been obvious to a person having ordinary skill in the art at the time of the invention to coat the material so that the weight does not increase by a factor of more than 7 in order to avoid producing a bulky and heavy material that is without practical use, especially since Slimak et al. disclose using a coating concentration of only 0.04 g sodium silicate per 1 kg of water. With regard to claim 2, Slimak et al. teach using cloth fabrics (column 9, line 54). With regard to claims 3 and 4, Slimak et al. teach using cotton fabric (column 10, line 1). With regard to claim 15, Slimak et al. teach using nonwoven fabric (column 30, lines 61-64). With regard to claims 37-42, adjusting the amount of coating on the fabric would be changing a result effective variable. Slimak et al. disclose soaking the samples in the solution for longer periods of time allows for an increase in waterglass coating on the samples (column 28, lines 48-

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64). The flammability of the composite would be affected by altering the amount of coating on the fabric. Given that the coating provides improved properties to the sample and that Slimak et al. teach how varying the amount of coating is done, absent any finding of unexpected results, it would have been obvious to one having ordinary skill in the art to vary the amount of coating in the sample of Slimak et al. in order to adjust the stiffness and flammability of the material, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

5. Claims 5, 7, 20, 21, 31, and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slimak et al. in view of Giesemann (U.S. Patent No. 5,431,996).

With regard to claims 5 and 7, Slimak et al. do not disclose the fibrous material to be made from a cellular structure. Giesemann discloses a composite article formed from nonwoven natural cellulosic materials coated with a fire resistant water glass (column 2, lines 13-47). Giesemann teaches various cellular materials that may be used (column 2, lines 24-47) and also discloses using recyclable material (column 1, line 63 and Example 5). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use the cellular and recycled materials of Giesemann in Slimak et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. With regard to claims 20 and 21, Slimak et al. do not disclose what thickness the materials should be. Giesemann discloses the thickness of the fibrous material as between 0.5 and 1 mm (column 2, line 23). It would have been

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obvious to a person having ordinary skill in the art at the time of the invention to make the material of Slimak et al. be between 0.5 and 1 mm in order to make the material useful for a building composite, as taught by Giesemann. With regard to claims 31 and 33-36, Slimak et al. do not teach adding a flame-retardant agent into the coating.

Giesemann discloses a water soluble fire retardant present in the coating an amount of 40 percent by weight (Example 1). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use the additional flame-retardant agent of Giesemann in the coating of Slimak et al. in order to improve flame resistance.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slimak et al. in view of Riker (U.S. Patent No. 5,405,555).

While Slimak et al. is directed improving cellulosic materials (column 1, line 51), the reference fails to teach rayon or viscose. Riker teaches that rayon, like cotton, is a suitable combustible cellulosic material (column 3, lines 43-52). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use rayon in Slimak et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

7. Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slimak et al. in view of Veiga et al. (U.S. Patent No. 5,622,662).

Slimak et al. do not disclose what thickness the materials should be. Veiga et al. teach that a fibrous insulation material may have a thickness range between 5 and 500 mils (column 4, lines 41-42). Since insulative material is used in a broad range of applications that require varying thickness, it would have been obvious to a person

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having ordinary skill in the art at the time of the invention to make the material of Slimak et al. with a thickness between 5 and 500 mils in order to provide a material with sufficient insulation capabilities for its intended use, as taught to be known by Veiga et al.

8. Claims 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slimak et al. in view of Kaneko et al. (U.S. Patent No. 3,963,547).

Slimak et al. do not teach adding a flame-retardant agent into the coating. However, such practice is well known. Kaneko et al. disclose adding fire retardant agent to waterglass coating solution (See examples and claims). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use the additional flame-retardant agents of Kaneko et al. in the coating of Slimak et al. in order to improve flame resistance.

Response to Arguments

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (571) 272-1479. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRP

JRP

December 20, 2004



TERREL MORRIS
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